

Amendments to the Drawings:

The attached replacement drawing sheet makes changes to Figs. 6A and 6B and replaces the original sheet with Figs. 6A and 6B.

Attachment: Replacement Sheet

REMARKS

Claims 32-39 are pending and claims 40-56 are withdrawn in this application. By this Amendment, the specification, the drawings and claims 37-39 are amended. Reconsideration of the application is respectfully requested.

The Office Action objects to the drawings because of informalities. The drawings are amended to correctly reference item 70 as the damper and item 72 as the lever in Figs. 6C and 6D. Thus, withdrawal of the objection to the drawings is respectfully requested.

The Office Action objects to the specification because of informalities. The specification is amended as suggested by the Patent Office. Accordingly, withdrawal of the objection to the specification is respectfully requested.

The Office Action objects to the claims because the Patent Office asserts that the specification, drawings and title all refer to the alignment of optical components of an optical measuring machine. Applicants respectfully disagree. Specifically, for example, the measuring system in claim 32 is used for calibration of a machine and includes two housings which are to be aligned relative to one another in order for the calibration of the machine to take place, as also described in the specification and the drawings. In contrast to the assertion in the Office Action, neither the description nor the drawings describe the alignment of any optical components within the housing, but describe rather the alignment of the housings themselves. Furthermore, there is no description in the specification or the drawings of an optical machine, but there is a description of a measuring system such as, for example, an optical measuring system, for mounting on a machine. There is no teaching in the specification that the machine is specifically an optical machine. For consistency, we also amend the title.

The Office Action amends claim 37-39 under 35 U.S.C. §112, second paragraph. The rejection is respectfully traversed.

In particular, claim 39 has been amended to more clearly recite a measuring system in which the base is adjustable relative to the first surface of the machine to which it is attached to adjust the relative angle between the base and the first surface. Moreover, claims 37 and 38 have been amended to more clearly recite that it is the second housing that starts in the same position in XYZ whatever the orientation of the first and second housings. Accordingly, withdrawal of the rejections of the claims under 35 U.S.C. §112, second paragraph, is respectfully requested.

The Office Action rejects claims 32-36 under 35 U.S.C. §102(a) over Applicants' admitted prior art (AAPA); claim 32 under 35 U.S.C. §102(b) over McMurtry (U.S. Patent No. 6,047,612); and claim 33 under 35 U.S.C. §103(a) over McMurtry in view of Lloyd et al. (U.S. Patent No. 5,435,072). The rejections are respectfully traversed.

In particular, none of the applied references, alone or in combination, disclose or suggest a measuring system for calibrating a machine that includes a base attachable to a first surface on which a first housing may be mounted, a second housing attachable to a second surface of the machine, the first and second housings each provided with a complementary part of a first mounting device, wherein at least one surface of the base and at least one surface of the first housing are each provided with a complementary part of the second mounting device such that the first and second housing may be aligned in any of a plurality of predetermined directions, without realignment of the first and second housings being required, as recited in independent claim 32.

AAPA teaches component parts of an optical measuring system that include two housings each of which containing optical elements of the system, and a base (Abstract). With reference to Fig. 1 of AAPA, AAPA teaches an optical measuring system that includes the base plate 10, a source housing 20 and a reflector housing 22, wherein the first and second housings are coupled together using a kinematic seat 18 (Fig. 1; pages 5-7). Thus, AAPA

does not disclose or suggest that the complementary parts of the second mounted device allow the first and second housings to be aligned in any of a plurality of predetermined direction, as recited in independent claim 32. Accordingly, AAPA fails to disclose or suggest each and every feature of independent claim 32.

Furthermore, McMurtry teaches a rotary bearing with a pair of bearing members, one of which has convex and planar surface portions, and the other one has concave and planar surface portions (Abstract). Moreover, McMurtry teaches a rotary bearing for use in an articulating probe (col. 1, lines 13-14), which is used to measure the dimensions of a workpiece mounted on a machine. McMurtry also teaches the use of an articulating probe head for a coordinate measuring machine that has a table on which a workpiece to be measured is typically mounted, and a movable arm (col. 2, lines 3-7), and the housing 12 of the articulating probe head 10 is mounted to the movable arm of the coordinate measuring machine, with the extension bar 20 connecting a touch probe 18 to the member 16 of the articulating probe head (col. 2, lines 8-12). In fact, McMurtry teaches that rotation of the first and second rotary axis members 14 and 16 is provided by rotary air bearings (col. 2, lines 21-24). However, because air bearings allow the continuous rotation of one housing relative to the other, the members 14 and 16 are not aligned when the two parts of the first mounting device are connected together. Accordingly, McMurtry fails to disclose or suggest a measuring system for calibrating a machine wherein a first and second housing may be aligned in a plurality of predetermined conditions, as recited in independent claim 32. Thus, McMurtry does not disclose or suggest each and every feature of independent claim 32.

Furthermore, the Office Action indicates that the air bearings can be replaced by ball races (Office Action, page 7, lines 6-7). Applicants respectfully point out that such ball races would not allow the first and second housings to be aligned in any of a plurality of predetermined directions, as recited in independent claim 32. Finally, McMurtry does not

disclose or suggest a measuring system for calibrating a machine, as is also recited in independent claim 32.

For at least these reasons, McMurtry fails to disclose or suggest each and every feature of independent claim 32. Accordingly, independent claim 32 is patentable over McMurtry.

Lloyd teaches a touch trigger probe that incorporates piezoelectric sensors whose outputs are processed by an interface circuit (Abstract). However, Lloyd fails to cure deficiencies in McMurtry in disclosing or rendering obvious the features of claim 33, including the features of independent claim 32.

For at least these reasons, independent claim 32, and its dependent claims, are patentable over all the applied references. Accordingly, withdrawal of the rejections of the claims under 35 U.S.C. §102(a), 35 U.S.C. §102(b) and 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 32-39 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:TMN/amw

Attachment:

Replacement Sheet - Figs. 6A and 6B

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